Applicant : Gernot Von Der Straten
Serial No. : 09/463,527
Filed : January 25, 2000
Page : 2 of 9

Attorney's Docket No.: 12758-
056US1 / 1997P01986WOUS

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-16. (Canceled)

17. (Previously Presented) A method for use in a communication network that supports data frames of a first protocol, where a data frame contains message data and a destination address that corresponds to a receiver, the method being performed in conjunction with a host device and a switching device that are on the communication network;

wherein the host device:

generates data packets from the data frame, where a data packet comprises a portion of the data frame, the data packet being of a second protocol, the data packet comprising the destination address and a first connection identifier that corresponds to the host device; and;

transmits the data packet to the switching device; and

wherein the switching device:

receives the data packet, the data packet comprising a received data packet;

reads the destination address from the received data packet;

selects a second connection identifier for the received data packet based on the destination address, the second connection identifier corresponding to the receiver;

generates a new data packet from the received data packet, the new data packet comprising the second connection identifier and the message data, wherein the switching

Applicant : Gernot Von Der Straten
Serial No. : 09/463,527
Filed : January 25, 2000
Page : 3 of 9

Attorney's Docket No.: 12758-
056US1 / 1997P01986WOUS

device receives data packets generated from the data frame while the new data packet is

being generated;

checks the new data packet error using a predetermined error checking technique,

the predetermined error checking technique comprising comparing reference data to the

message data, wherein checking begins while the switching device receives data packets

generated from the data frame; and

transmits the new data packet to the receiver if the new data packet does not

contain a transmission error.

18. (Previously Presented) The method of claim 17, wherein the switching device:

modifies the message data; and

generates new reference data to use in the predetermined error checking technique, the

new reference data being compared to modified message data during checking.

19. (Previously Presented) The method of claim 18, wherein the message data is

modified to include a counter value that is based on prior transmissions of data packets for the

data frame.

20. (Previously Presented) The method of claim 18, wherein the switching device:

receives plural data packets from the host device, the plural data packet

comprising received data packets;

reads destination addresses from the received data packets;

selects a second connection identifier for the received data packets based on the

destination addresses, the second connection identifier corresponding to the receiver; and

generates new data packets from the received data packets, the new data packets

comprising the second connection identifier and message data;

wherein checking and generating the new reference data occur contemporaneously with

generating the new data packets.

21.   (Previously Presented) The method of claim 17, wherein the switching device:

receives plural data packets from the host device, the plural data packet

comprising received data packets;

reads destination addresses from the received data packets;

selects a second connection identifier for the received data packets based on the

destination addresses, the second connection identifier corresponding to the receiver; and

generates new data packets from the received data packets, the new data packets

comprising the second connection identifier and message data; and

wherein generating the new data packets occurs contemporaneously with receipt of the

plural data packets.

22.   (Previously Presented) The method of claim 17, wherein the first protocol is the

Internet protocol or a protocol based on the Internet protocol; and

wherein the second protocol is the ATM protocol or a protocol based on the ATM

protocol.

23. (Previously Presented) The method of claim 17, wherein the switching device:

stores, in a first revaluation memory, an entry for use in recognizing the received data

packet.

24. (Previously Presented) The method of claim 23, wherein the switching device:

stores the second connection identifier in the first revaluation memory after receiving the

received data packet, the second connection identifier overwriting the entry; and

stores the entry in the first revaluation memory after receiving a last data packet that

corresponds to the data frame, the entry overwriting the second connection identifier.

25. (Previously Presented) The method of claim 24, wherein the switching device

identifies data packets that correspond to the data frame, and that are received after the received

data packet using the second connection identifier stored in the first revaluation memory.

26. (Previously Presented) The method of claim 23, wherein the switching device:

stores the second connection identifier in a second revaluation memory, the second

revaluation memory for allocating the second connection identifier to the destination address.

27. (Previously Presented) The method of claim 26, wherein at least one of the first

revaluation memory and the second revaluation memory comprises an associative memory.

28. (Previously Presented) A switching unit for routing data, the data comprising a number of data frames of a first protocol, each data frame comprising message data and a destination address corresponding to a receiver, each data frame corresponding to data packets for transmission, each data packet comprising a portion of the message data and a first connection identifier, the switching unit comprising:

a receiver for receiving the data packets;

a processing unit for reading a destination address from a data packet and for determining a second connection identifier based on the destination address, the second connection identifier corresponding to the receiver, the processing unit for generating new data packets from the data packets received by the receiver the new data packets containing message data and the second connection identifier, wherein the receiver receives data packets that correspond to the data frame while the new data packets are being generated;

an error checking unit for checking the new data packets for transmission errors using a predetermined error checking technique that compares reference data to message data in the new data packets, wherein checking begins while the receiver receives data packets that correspond to the data frame; and

a transmission unit for sending new data packets to the receiver if the new data packets do not contain transmission errors.

29. (Previously Presented) The switching unit of claim 28, further comprising:

a first revaluation memory for use in allocating the second connection identifier to a received data packet.

Applicant : Gernot Von Der Straten
Serial No. : 09/463,527
Filed : January 25, 2000
Page : 7 of 9

Attorney's Docket No.: 12758-
056US1 / 1997P01986WOUS

30. (Previously Presented) The switching of claim 29, wherein the first revaluation memory contains an entry having a predetermined value that identifies connection identifiers of received data packets.

31. (Previously Presented) The switching unit of claim 28, further comprising:

a second revaluation memory for use in allocating the second connection identifier to at least one destination address.

32. (Previously Presented) The switching unit of claim 29, wherein at least one of the first revaluation memory and the second revaluation memory comprises an associative memory.